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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,061	10/01/2003	Robert Vago	0069317-000004	7749

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EXAMINER	
ROY, BAISAKHI	

ART UNIT	PAPER NUMBER
3737	

NOTIFICATION DATE	DELIVERY MODE
11/16/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/676,061	VAGO, ROBERT	
	Examiner	Art Unit	
	Baisakhi Roy	3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 August 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-16,18-26 and 28-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5, 7-16, 18-26, and 28-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-5, 7-16, 18-26, and 28-35 have been considered but are moot in view of the new ground(s) of rejection.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-5, 7-16, 18-26, 28-35 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of copending Application No. 11/042,607. Although the conflicting claims are not identical, they are not patentably distinct from each other because the more specific claims in the '607 application directed to a wound treatment apparatus and method clearly anticipate the claims in the current application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2, 4, 7-13, 14, 16, 18-21, 25, 28-31, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Madanshetty in view of Vago (5665141) and further in view of Laugharn, Jr. et al. (6719449).

Madanshetty discloses a method and apparatus for controlling acoustic coaxing induced microcavitation in a fluid medium to perform various tasks including surgical use with respect to tissue and bone structures (col. 9 lines 4-13). The treatment apparatus includes a fluid chamber 45 comprising a tank, which couples the acoustic field with an object or tissue and which confines the liquid medium about the transducer and the microcavitation site (col. 10 lines 12-27, col. 14 lines 29-59) and the liquid is contained in a liquid retaining structure. The transducer module 53 is disposed within a nozzle 52 which includes a jet 55 jet through which liquid medium flows when pumped or transferred to chamber via conduit 59 from the tank or other external source. The electrical signal generator 40, capable of generating a bi-polar square, triangular, or a combination of waveforms of various shapes may be used (col. 12 lines 6-11). The generator is connected to the transducer for energizing the same with an alternating

electrical signal that is partially rectified and energizing a transducer with periods of full-wave compression and rarefaction cycles alternating with periods of rectified-wave compression pressure cycles (col. 10 lines 28-55, col. 12 lines 58-67, col. 13 lines 1-3). The system includes a controller 42 coupled to the signal generator for controlling an amplitude of the alternating electrical signal determining the intensity of the ultrasonic pressure waves produced in the tank by the transducer and also varying a pulse repetition period of the electrical signal (col. 12 lines 27-36). The reference the transducer module which uses LTZ-1 shaped piezoelectric ceramic (col. 13 lines 25-44). Madanshetty teaches adding particles to the medium varying the dissolved air content of the host water (col. 11 lines 30-35).

Madanshetty does not explicitly teach the step of obviating or avoiding inertial or transient cavitation. In the same field of endeavor Vago discloses an ultrasonic diagnostic apparatus and method where transient or inertial cavitation is suppressed (col. 11 lines 13-22). It would be obvious to one of ordinary skill in the art to use the teaching by Vago to modify the teaching by Madanshetty for the purpose of improving treatment, shorten treatment period, and prevent spread of thermal degeneration by localizing it to desired area.

Vago does not explicitly teach the use of sensors to sense transient or inertial cavitation. In the same field of endeavor Laugharn, Jr. et al. disclose an ultrasonic treatment device and method which includes selectively controlling sonic energy, regulating location of sonic energy, pulse pattern, intensity, and dosage and includes cavitation sensors for detecting cavitation (col. 47 lines 25-42). It would have therefore

been obvious to one of ordinary skill in the art to use the teaching by Laugharn, Jr. et al. to modify the teaching by Madanshetty and for the purpose of effectively detecting and controlling cavitation such that the sample is exposed to produce a desired result (col. 1 lines 40-42).

5. Claims 3, 15, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Madanshetty in view of Vago in view of Laugharn, Jr. et al. and further in view Schutt. Madanshetty does not explicitly disclose a venturi injector. In the same field of endeavor Schutt discloses the use of a venturi injector (col. 12 lines 4-5). It would have therefore been obvious to one of ordinary skill in the art to use the teaching by Schutt to modify the teaching by Madanshetty for the purpose of enabling the formation of microbubbles as ultrasound contrast enhancement agents and therefore enhanced imaging. (col. 4 line 49).

6. Claims 5 and 22-24 rejected under 35 U.S.C. 103(a) as being unpatentable over Madanshetty in view of Vago in view of Laugharn, Jr. et al. and further in view of Allinger. Madanshetty does not explicitly teach the step of removing the killed organism from the tank and disinfecting the water in the tank. In the same field of endeavor Alliger discloses a method of disinfecting fish tanks using a disinfectant (col. 4 lines 60-61) and used in combination with ultrasonic cavitation (col. 5 line 54 – col. 6 line 29). It would have therefore been obvious to one of ordinary skill in the art to use the teaching by Alliger to modify the teaching by Madanshetty for the purpose of effectively killing germs from the living organism and sanitizing the tank (col. 6 lines 51-55).

7. Claims 32 and 33 rejected under 35 U.S.C. 103(a) as being unpatentable over Madanshetty in view of Vago in view of Laugharn, Jr. et al. and further in view Robinson, Jr. Madanshetty teaches the application of this technique for medical or biological applications including cleaning but does not explicitly teach application on fishes. In the same field of endeavor Robinson, Jr. discloses an ultrasonic treatment method involving the use of an ultrasonic aqueous bath of sufficient energy level or of a frequency range and an intensity duration to cause cavitation impingement of the living organism and achieves microscopic cleaning of a dead or living organism or shellfish (abstract lines 8 – 14, col. 3 lines 26-38). The method involves applying ultrasonic waves to a tank holding live organism immersed in a fluid causing cavitation to sanitize the tissues of dead or living organism (col. 4 lines 3-11). It would have therefore been obvious to one of ordinary skill in the art to use the teaching by Robinson, Jr. to modify the teaching by Madanshetty for the purpose of reducing pathogen contamination of fishes and ensure better quality (col. 7 lines 47-56).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baisakhi Roy whose telephone number is 571-272-7139. The examiner can normally be reached on M-F (7:30 a.m. - 4p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian L. Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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